

## **Dissertations Initiative for the Advancement of Limnology and Oceanography: DIALOG III and IV**

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### **LONG TERM GOALS**

Originally founded in 1994, the Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) program seeks to (1) facilitate interdisciplinary, inter-institutional and international aquatic science research, understanding and collaborations; (2) reduce the historical, institutional and philosophical barriers that limit the exchange of information among aquatic scientists; and (3) expedite the transition from Ph.D. student to independent researcher.

### **OBJECTIVES**

DIALOG is an educational and human resource program. It targets aquatic scientists and those in related disciplines that have recently obtained their Ph.D. degrees and wish to pursue interdisciplinary aquatic science research. DIALOG consists of three parts.

- **Ph.D. Dissertation registry:** Recent Ph.D. recipients are invited to submit an abstract of their Ph.D. dissertation research for inclusion in the DIALOG Dissertation Registry.
- **Database:** Demographic information is collected with the dissertation abstracts in order to characterize recent graduates for human-resource purposes.
- **Symposium:** A symposium is held every other year to enhance interdisciplinary understanding and promote collegial interactions across the aquatic sciences. The third DIALOG symposium was held October 17-24, 1999. Graduates who completed their Ph.D. between April 1, 1997 and March 31, 1999 were eligible.

### **APPROACH**

Using advertisements through American Society of Limnology and Oceanography (ASLO), and other professional societies, mailings, handouts, and a web site, the program is announced as widely as possible to reach all potential participants. All program and symposium application procedures are accomplished through the web site (<http://www.aslo.org/dialog.html>).

1. **Ph.D. Dissertation registry:** The registry provides a unique introduction to the work of this most recent generation of aquatic scientists. Each year increasing numbers of graduates take advantage of the opportunity to be part of this international collection, and more scientists, employers and administrators use this resource to identify recent graduates and get an overview of their work.

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Dissertation abstracts are submitted on line and immediately posted on the ASLO web site in a format that can be searched by year, name, and key words ([www.aslo.org/dialog/dcite.html](http://www.aslo.org/dialog/dcite.html)). Each issue of the *ASLO Bulletin* contains dissertation citations and e-mail addresses of those submitting abstracts since the previous bulletin deadline. In addition to the recognition, program participants receive a compilation of abstracts, a directory, and a demographic profile of their cohort.

2. **Database:** Information submitted by program applicants and the results of surveys completed by symposium participants are compiled in a database and used to characterize program participants and to assess trends.

3. **Symposium:** If individuals wish to be considered for symposium participation, they are also asked to submit a two page CV (with list of peer-reviewed publications), a one-page essay answering the question “Why do you want to attend the DIALOG symposium?” a half page essay answering the question “What do you consider to be the most interesting/challenging/important issue in limnology or oceanography today?” and, two letters of recommendation. A six member committee represented by the breadth of the aquatic science research community reviews applicants.

## **WORK COMPLETED**

A total of 166 dissertation abstracts were received for the DIALOG III Program, with 92 individuals applying for the DIALOG III symposium. This represents a 69% increase in submissions compared with the DIALOG II Program (98 abstracts submitted with 87 applying for the symposium), even though the eligibility period for DIALOG III was shorter (24 months for DIALOG III, compared with 34 months for DIALOG II). These numbers indicate that many individuals are taking advantage of the opportunity to “register” their dissertations, even if they are not interested in the symposium.

The 166 program participants were citizens of the following countries: Argentina (3); Australia (1); Austria (1); Belgium (1); Brazil (5); Canada (8); Chile (1); China (4); Denmark (1); Egypt (1); Finland (1); France (3); Germany (12); Greece (1); India (2); Indonesia (1); Israel (2); Italy (2); Japan (7); Kenya (1); Korea (1); The Netherlands (4); New Zealand (5); Norway (1); Poland (2); Russia (3); Sweden (9); Switzerland (1); Turkey (1); United Kingdom (3); and United States (78). Of the 166 DIALOG III participants, 92 completed their Ph.D. at U.S. institutions (Table I), including 16 citizens of other countries (2 Brazilians, 2 Canadians, 2 Chinese, 1 Dutch, 3 Germans, 1 Israeli, 1 Korean, 2 Russians, 1 Swedish and 1 Swiss). Two U.S. citizens completed their degrees outside the U.S. (one in Sweden and one in Denmark).

The 78 U.S. citizens had the following characteristics:

- 39 female, 39 male;
- 25 limnologists, 53 oceanographers;
- 7 underrepresented minorities (5 Hispanic, 1 African American, 1 native American/Alaskan);
- 64 were on postdoctoral or other temporary positions; 10 had permanent positions (2 of 10 were permanent, “soft money” positions); 3 were unemployed; and 1 made no response;
- 51 held positions within academia; 15 within government; 1 within industry; and 11 “other”.

The 88 citizens of other countries had the following characteristics:

- 30 female, 58 male;
- 39 limnologists, 49 oceanographers;

- 64 were on postdoctoral or other temporary positions; 20 had permanent positions (four of 19 were permanent, “soft money” positions); 4 were unemployed;
- 59 held positions within academia; 14 within government; 2 within industry; and 13 “other”.

## RESULTS

Forty-three symposium participants were selected from the 92 applicants; all 43 accepted. Selection was based on scientific training, dissertation topic and execution, interdisciplinary experience and interests, letters of recommendation, and program balance. With so many qualified candidates, many factors in addition to excellence in research were considered and many worthy individuals had to be turned away to maintain the critical size for fostering long-term interactions.

Participants came from a variety of institutions, including some of the most innovative and productive aquatic research programs in the world. The international mix provides valuable insight into the research strengths and concerns in different parts of the globe. Unlike so many professional conferences where multiple concurrent sessions force us to attend narrow sessions on select topics, the DIALOG symposium affords the luxury of listening without distraction to a diverse array of topics, to look for relationships and develop a broader context for their work.

**TABLE I. Institutions granting Ph.D. degrees to the 166 DIALOG III program participants. Numbers refer to the number of program participants who indicated limnology (lim) or oceanography (oce) as their primary field of interest.**

Lim	Oce	U.S. Institutions	Lim	Oce	Institutions Outside the U.S.
1	0	Clemson University	1	0	Aachen University of Technology (Germany)
0	3	College of William and Mary	1	0	Agricultural Univ. of Wageningen (Netherlands)
1	0	Dartmouth College	1	0	Ain Shams University (Egypt)
0	1	Florida State University	0	1	Bar Ilan University (Israel)
0	1	Georgia Institute of Technology	0	4	Dalhousie University (Canada)
0	2	Louisiana State University	2	0	Dresden University of Technology (Germany)
1	0	Michigan Technological University	1	0	Free University of Amsterdam (The Netherlands)
1	0	Northwestern University	0	2	Hokkaido University (Japan)
2	0	Ohio State University	0	1	Kyoto University (Japan)
0	1	Oklahoma State University	0	1	Linkoping University (Sweden)
0	1	Old Dominion University	1	0	M.V. Lomonosov Moscow State University (Russia)
0	1	Oregon State University	0	1	Memorial University of Newfoundland (Canada)
0	1	Rutgers University	1	0	Polish Academy of Sciences (Poland)
0	2	Stanford University	1	0	Punjabi University at Patiala (India)
0	3	State University of New York at Stony Brook	1	0	Queen's University (Canada)
0	5	Texas A & M University	0	1	Southampton University (United Kingdom)
1	0	University of Alabama	0	1	St. Petersburg University (Russia)
1	0	University of Arkansas			
2	2	University of California at Davis			
0	1	University of California at Irvine			
0	1	University of California at San Diego			

1	3	University of California at Santa Barbara	0	2	Stockholm University (Sweden)
0	1	University of California at Santa Cruz	0	1	Tohoku University (Japan)
0	1	University of Chicago	0	1	Tokyo University of Agriculture and Tech. (Japan)
2	0	University of Colorado	1	0	Trent University (Canada)
0	1	University of Delaware	1	0	Umea University (Sweden)
0	1	University of Florida	0	1	United Graduated School of Ehime (Japan)
1	0	University of Georgia	1	0	Univ. Natl. del Sur, Bahia Blanca (Argentina)
0	2	University of Hawaii	0	1	Universida de Federal do Parana (Brazil)
0	1	University of Houston	1	0	Universitaires Notre-Dame de la Paix (Belgium)
0	2	University of Maine	0	1	Universite de la Mediterranee at Marseille (France)
0	8	University of Maryland	0	1	University of Bordeaux (France)
0	1	University of Miami	0	1	University of Aarhus (Denmark)
1	0	University of Michigan	1	0	University of Amsterdam (The Netherlands)
1	0	University of Minnesota	0	1	University of Athens (Greece)
1	0	University of Mississippi	0	2	University of Auckland (New Zealand)
1	0	University of Nebraska	0	3	University of Bremen (Germany)
1	0	University of Nevada at Reno	1	3	University of British Columbia (Canada)
1	0	University of New Mexico	0	1	University of Buenos Aires (Argentina)
0	1	University of North Carolina at Chapel Hill	1	0	University of Chile (Chile)
2	0	University of Notre Dame	0	1	University of Essex (United Kingdom)
0	1	University of Puerto Rico at Mayaguez	0	1	University of Helsinki (Finland)
0	6	University of Rhode Island	1	0	University of Hull (United Kingdom)
1	0	University of South Carolina	0	1	University of Kerala (India)
0	2	University of Southern California	0	1	University of Kiel (Germany)
1	1	University of Texas at Austin	1	0	University of London (United Kingdom)
1	0	University of Virginia	1	0	University of Lund (Sweden)
0	4	University of Washington	2	0	University of New South Wales (Australia)
3	0	University of Wisconsin at Madison	0	1	University of Perpignan-EPHE (France)
1	0	University of Wisconsin at Milwaukee	0	1	University of Plymouth (United Kingdom)
0	2	Woods Hole Oceanographic Institution/MIT	0	1	University of Rostock (Germany)
			0	1	University of Tokyo (Japan)
			1	0	University of Utrecht (The Netherlands)
			1	0	University of Vienna (Austria)
			0	1	University of Waikato (New Zealand)
			0	1	University of Wales (United Kingdom)
			1	0	University of Warsaw (Poland)
			1	0	University Paris Va de Marne Paris XII (France)
			1	0	University Pierre et Marie Curie (France)
			5	0	Uppsala University (Sweden)
			1	0	Vienna University (Austria)
<b>29</b>	<b>63</b>	<b>Total, U.S. Institutions</b>	<b>33</b>	<b>41</b>	<b>Total, Institutions Outside the U.S.</b>

## **IMPACT**

The DIALOG Program is a long-term investment in human resources and science infrastructure. Direct and indirect results should benefit the aggregate research community, as well as our society, which increasingly depends on research results for understanding and managing aquatic systems and resources. The most interesting and important questions in aquatic and other sciences today are increasingly interdisciplinary. In addition, we find that our scientific community and society as a whole are increasingly global, interdependent, and interactive. Therefore the very concept of the DIALOG program is pertinent and timely as it facilitates the vital exchange of knowledge, ideas, and science that is necessary in this new scientific climate and global community. The symposium, in particular, brings together scientists, at a pivotal point in their research careers, from across the full spectrum of biologically relevant aquatic science, from a variety of scientific backgrounds, from various institutions, and from different countries and cultures. This dynamic mix then participates in an intensive seven-day symposium where all participants gain an overview of the work of the others and are exposed to different ways of thinking about and conducting research. The collegial bonds and lines of communication formed will remain throughout their professional careers to sustain, stimulate, and enhance their work. The scientific community and the general population benefit from the perspectives these “new” scientists bring back to their home institutions (and countries) and then go on to share with their students and colleagues.

## **TRANSITIONS**

1. Participants in the DIALOG symposia have been involved in interdisciplinary (including some international) research collaborations; an international student exchange program at two institutions; the organization of several workshops and meeting sessions; and the ongoing communication throughout the entire group about research, education and science policy issues via an electronic distribution list.
2. The dissertation compilation (available on the web site and compiled into a printed publication after each symposium) has been and is continuing to be used by journal editors and program officers to identify reviewers; by meeting organizers to identify speakers and session chairs; by scientists and administrators to get an overview of the latest research and to identify potential postdoctoral researchers and job applicants; and by fellow students, researchers, and new entrants to the aquatic science community.
3. The demographic information is providing a profile of the newest entrants to the aquatic science community--their gender, age, ethnicity, citizenship, Ph.D.-granting institutions and subsequent employers, and disciplinary interests. This information should enable a variety of interest groups to better track the aquatic science community (which has been difficult to profile, due to the large number of degree-granting institutions, departments in which an aquatic scientist might reside, and variety of key words under which aquatic science falls in general science databases).

## **RELATED PROJECTS**

None

## **PUBLICATIONS**

Weiler, C.S. 1999. Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG III): Ph.D. Dissertation Abstracts and Program Summary. 167 pp.

Weiler, C.S. 1999. Congratulations recent Ph.D. Recipients! *ASLO Bulletin* 8(1): 24-25.

Weiler, C.S. 1999. DIALOG III. *ASLO Bulletin* 8(1):25.

Weiler, C.S. 1999. DIALOG IV Program. *ASLO Bulletin* 8(2):11.

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Weiler, C.S. 2000. DIALOG IV Dissertation Citations. *ASLO Bulletin* 9(1):14.

Weiler, C.S. 2000. Dissertation Initiative for the Advancement of Limnology and Oceanography: DIALOG III program report. Accepted, *ASLO Bulletin* 9(2).

Weiler, C.S., S.E. Beaulieu and other DIALOG III participants. 2000. Perspectives on graduate education experiences in aquatic science. Accepted, *ASLO Bulletin* 9(2).

Weiler, C.S. 2000. DIALOG IV Dissertation Citations. Accepted, *ASLO Bulletin* 9(2).